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BRUHAT BANGALORE MAHANAGARA PALIKE

DASARAHALLI ZONE

DIVISION: DASARAHALLI

SUB DIVISION: SHETTYHALLI

NAME OF WORK: Construction of R.O plant in ward no 12, Shettyhalli sub Division

Estimated Cost : 15.00 Lakhs

BRUHAT BANGALORE MAHANAGARA PALIKE

DASARAHALLY ZONE

Name of Work : Estimate for Construction of RO Plant in Ward No. 12, Shettyhally Sub Division

Estimated cost : Rs 15.00 Lakhs		P code-3445				Job No : 012-19-000015			
Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	ROOM FOR RO PLANT								
1	KSRB 2-2.1 : Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, **in ordinary soil** not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5 **(P. No. 5 / It. No. 2.3 of PWD SR 2016-17**								
	Centre Line	Cum	1	15.80	1.00	1.00	15.80		
	Columns		4	1.35	1.35	1.30	9.48		
							25.28	204.12	**5160.00**
	Basic Rate	189.00							
	Area Weightage @ 8%	15.12							
	Total	**204.12**							
2	KSRB 4-1.3 : Providing and laying in position **plain cement concrete of mix 1:4:8** with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, **in foundation**, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. **Page No.12, Item No. 4.3 of PWD SR 2016-17**								
	Wall Portion	Cum	1	15.80	0.75	0.15	1.78		
	for Footing		4	1.20	1.20	0.15	0.86		
	For Flooring		1	4.30	2.80	0.15	1.81		
							4.45	5256.36	**23378.00**
	Basic Rate	4867.00							
	Area Weightage @ 8%	389.36							
	Total	**5256.36**							
3	KSRB 5.2-3 : Providing and constructing granite / trap / basalt size stone masonry in **foundation with cement mortar 1:6, stone** hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 **Page No. 23 / Item No. 5.6, PWD SR 2016-17**								
	Wall Portion	Cum	1	15.80	0.60	0.60	5.69		
	Deduction for Columns		4	1.20	0.60	0.60	-1.73		
							3.96	4521.96	**17907.00**
	Basic Rate	4187.00							
	Area Weightage @ 8%	334.96							
	Total	**4521.96**							

	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
4	KSRB 5.3-3 : Providing and constructing granite / trap / basalt size stone masonry in **basement with cement mortar 1:6,** edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 **Page No. 23 / Item No. 5.9, PWD SR 2016-17**								
	Wall Portion	Cum	1	15.80	0.45	0.45	3.20		
	Deduction for Columns		4	1.20	0.45	0.45	-0.97		
							2.23	5405.40	**12041.00**
	Basic Rate	5005.00							
	Area Weightage @ 8%	400.40							
	Total	**5405.40**							
5	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20cms, in depth, compacting each deposited layers by ramming after watering with lead upto 50m, and lift upto 1.5m, including cost of all labour complete as per specifications, specification. No. KBS 2.9, **Page No. 6 / It. No. 2.10 / PWD SR 2016-17**								
		Cum	Qty Vide Item No. 1				**25.28**	137.16	**3467.00**
	Basic Rate	127.00							
	Area Weightage @ 8%	10.16							
	Total	**137.16**							
6	KSRB 5-14 : Providing and constructing load bearing wall with solid concrete blocks of size 400x150x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 4.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications. KBS No.5.4 **Page No. 25 / It. No. 5.26.2, PWD SR 2016-17**								
	Wall Portion	Sqm	2	4.90		2.50	24.50		
			2	3.00		2.80	16.80		
	Parapet Wall		2	4.90		0.60	5.88		
			2	3.00		0.60	3.60		
	Steps		2	4.00		0.15	1.20		
							51.98		
	Deductions RS		1	3.00		2.10	6.30		
	V		2	0.90		0.60	1.08		
	Plinth		1	15.80		0.15	2.37		
	Lintels		1	15.80		0.20	3.16		
							-12.91		
							39.07	979.56	**38271.00**
	Basic Rate	907.00							
	Area Weightage @ 8%	72.56							
	Total	**979.56**							
7	Providing and laying **cement concrete** using 20 mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete **(RMC) M 20** for R.C.C works laid in 15 cms thick layers and well compacted vibrating, curing, **for raft foundation column footing , main and secondary beams** with all lead and lifts etc., complete (exclusive of cost of steel and fabrication charges.) **Page No. 18, Item No. 4.48, PWD SR 2016-17**								
	Column Footing	Cum	4	1.20	1.20	0.50	2.88		
			4	0.45	0.20	3.80	1.37		

	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	Plinth Beam		1	15.80	0.23	0.20	0.73		
	Lintels		1	15.80	0.20	0.15	0.47		
	Roof beam		1	15.80	0.20	0.30	0.95		
	Roof Slab		1	6.10	4.00	0.15	3.66		
	Basic Rate	5879.00					**10.06**	6349.32	**63854.00**
	Area Weightage @ 8%	470.32							
	Total	**6349.32**							
	KSRB 4.9.2 : Providing **T.M.T steel reinforcement for R.C.C work** including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of 4.6.3 **- TMT bars Fe 500 Page No. 17 / It No. 4.46.2, PWD SR 2016-17**								
	For Roof, Columns @ 100 Kg / Cum	Tonne	120	10.06			1206.82		
							1206.82		
	Revised Basic Rate	60607.00				or	~~1.21~~ 2.25	65455.56	~~78992.82~~ 147275/-
	Area Weightage @ 8%	4848.56							
	Total	**65455.56**							
9	KSRB 4-6.4 : Providing and removing **centering, shuttering, strutting, propping** etc., and removal of form work for **vertical surface such as walls at any thickness**, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 **Page No. 15 / Item No. 4.31 PWD SR 2016-17**								
	Columns Footing	Sqm	4	4.80		0.50	9.60		
			4	1.30		4.00	20.80		
	Plinth		2	15.80		0.30	9.48		
	Lintels		2	15.80		0.20	6.32		
	Roof		1	6.10	4.00		24.40		
	Sides		2	6.10		0.15	1.83		
			2	4.00		0.15	1.20		
							73.63	316.44	**23299.00**
	Basic Rate	293.00							
	Area Weightage @ 8%	23.44							
	Total	**316.44**							
10	KSRB15-3-13 : Providing 12mm thick cement plaster in single coat with cement mortar 1:3, to **ceiling** including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. **Page No. 114, Item No. 15.21 of PWD SR 2016-17**								
	Inside wall	Sqm	1	4.50	3.00		13.50		
	Outside		2	4.90	0.45		4.41		
			1	4.30	0.50		2.15		
			1	4.30	0.75		3.23		
							23.29	208.44	**4854.00**
	Basic Rate	193.00							
	Area Weightage @ 8%	15.44							
	Total	**208.44**							

	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	KSRB15-3.12 :Providing 20mm thick cement plaster in single coat with cement mortar 1:6, to stone masonry & concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. **Page No. 114, Item No. 15.21 of PWD SR 2016-17 (Inside Plastering)**								
	Inside wall	Sqm	2	4.50		3.00	27.00		
			2	3.00		3.00	18.00		
							45.00		
	Deductions - For door Doors		0.5x1	3.00		2.10	3.15		
	Door 1		0.5x2	0.90		0.60	0.54		
							-3.69		
							41.31	224.64	**9280.00**
	Basic Rate	208.00							
	Area Weightage @ 8%	16.64							
	Total	**224.64**							
12	KSRB15-7 : Providing lime rendering for plastering to wall and ceiling, including cost of materials, labour, curing complete as per specifications. **Page No. 115, Item No. 15.33, PWD SR 2016-17**								
		Sqm	Qty Vide Item No. 10+11				**64.60**	27.00	**1744.00**
	Basic Rate	25.00							
	Area Weightage @ 8%	2.00							
	Total	**27.00**							
13	KSRB15-3.9 :Providing 18mm thick cement plaster in single coat with cement mortar 1:6, to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. **P.No. 114 / It. No. 15.17, PWD SR 2016-17**								
	Out Side	Sqm	2	4.90		3.75	36.75		
			2	3.40		3.75	25.50		
							62.25		
	Deductions for Door		0.5x1	3.00		2.10	3.15		
	V		0.5x2	0.90		0.60	0.54		
							-3.69		
							58.56	213.84	**12522.00**
	Basic Rate	198.00							
	Area Weightage @ 8%	15.84							
	Total	**213.84**							
14	KSRB 15-14.1 : Providing and **applying two coats with oil bound washable distemper** of approved brand and shade on wall surface including priming coat with distemper primer after throughly brooming the surface free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications. **Page No. 117 / Item No. 15.49.1, PWD SR 2016-17**								
		Sqm	Qty Vide Item No.10+11				105.91		
							105.91	76.68	**8121.00**
	Basic Rate	71.00							
	Area Weightage @ 8%	5.68							
	Total	**76.68**							

	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	KSRB 15-16.1 : Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after throughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. - with primer. **Page No. 117 / Item No. 15.53.2, SR 2016-17.**								
		Sqm	Qty Vide Item No.13				58.56		
							58.56	90.72	**5313.00**
	Basic Rate	84.00							
	Area Weightage @ 8%	6.72							
	Total	**90.72**							
16	KSRB 15-18.2 : Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications. **(Page No. 120 Item No. 15.74 of SR 2016-17**).								
	Out Side	Sqm	2.25	1	6.00	2.10	28.35		
				2	0.90	0.60	1.08		
							29.43	88.56	**2606.00**
	Basic Rate	82.00							
	Area Weightage @ 8%	6.56							
	Total	**88.56**							
17	Providing and fixing Special make glazed Vitrified tiles (Granomite finish) of approved make, quality and colour of size 600x600x10mm thick fixed on existing flooring with a special roffe adhesive for flooring and skirting etc., complete including providing spears at required interval and removing stains etc., complete. **(P.No. 107, I.No. 14.43 of SR 2016-17).**								
		Sqm	1	4.50	3.00		13.50		
			2	4.50		0.10	0.90		
			2	3.00		0.10	0.60		
							15.00	1285.20	**19278.00**
	Basic Rate	1190.00							
	Area Weightage @ 8%	95.20							
	Total	**1285.20**							
18	Providing and laying/fixing cement base, precast, pre polished cement concrete, designer tiles 25mm thick for flooring conforming to IS 1237 heavy duty tiles for flooring, treads of steps and landing, laid on a bed of 12mm thick cement mortar 1:3 mis finished with flush pointing using white cement, including cost of materials, including cutting, griding the edge to half/full round wherever required, labour, curing complete as per specification. **P.No. 109, I.No. 14.62 of PWD SR 2016-17**								
	front side	Sqm	2	4.30		0.60	5.16		
							5.16	1171.80	**6046.00**
	Basic Rate	1085.00							
	Area Weightage @ 8%	86.80							
	Total	**1171.80**							

	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	KSRB 7.7 : Providing and fixing in position in cement concrete 1:3:6 **steel glazed windows and ventilators** side hung/top hung fully openable as per approved drawings using Z angles of 25x33x3mm, weighing 1.419 Kg/m both for outer and inner frames and central mullion section of size 25x46x3mm. weighing 2.28Kg/m duly providing T section 19x19x3mm weighing 0.839 kg/m for glazing of windows not more than 34 cms. c to c including providing and fixing 4mm. thick reeded glass with teakwood beading of required size, all steel sections should confirm to I.S 7452:1990, 4nos. of holdfasts of approved size, section should be cut to length welded and electrically grinded subdividing frames of unit shall be tenonned and revetted into the frames electrically. All the steel surface shall be throughly cleaned free of rust and painted with one coat of anti-corosive paint and finishing with two coats of ready mix paint of approved colour and make including cost of materials, fixtures, labour and HOM of machinery complete as per specifications. Specification No. KBS 7.12.1 / 7.12.2 / 7.12.3 / 7.12 **Page No. 31, Item No. 707 PWD SR 2016-17**									
		Sqm	2	0.90		0.60	1.08		
							1.08	3812.40	**4117.00**
	Basic Rate	3530.00							
	Area Weightage @ 8%	282.40							
	Total	**3812.40**							
20	KSRB 7.5 : Providing and fixing **pull and push type rolling shutters** of approved make out of 18 guage, 75mm wide cold rolled steel laths of convex corrugation, with side guides and bottom rail, with interlocking arrangements for steel laths by means of alternate clips, suspension shaft with High tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & pull operations complete including pulling hooks, 4Nos. handles with all fittings and accessories, painted with a coat of red lead paint (without top cover) cost of materials, labour, HOM of machinery complete as per specifications. **Shutter size 3mx2.8 m**. Specification No. KBS 7.10 / 7.12. (**P.No. 31, I.No. 7.5 of CSR 2016-17**)									
		Sqm	1	3.00		2.10	6.30		
							6.30	3090.96	**19473.00**
	Basic Rate	2862.00							
	Area Weightage @ 8%	228.96							
	Total	**3090.96**							

	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
1	KSRB 7.15 : Providing, fabricating, assembling and fixing in **position aluminium partitions using aluminium sections** of mat finish or glassy finish in combination of plain grove, single grove and double grove as per requirements for the frames of overall size 63.5mm x 38.1mm. with thickness of 2mm. having section weight, plain sections 1.054kg/m, single grove thickness 1.95mm. section weight 1.094kg/m, double grove thickness 1.9mm section weight 1.094kg/m and bottom member 114.3 mm. x 44.45mm. thickness 3.18mm. weight 2.646 kg/m; aluminium louvres section of size 36.5mmx34.93mm 1.45mm. thick section weight 0.429kg/m; bottom portions provided with 12mm. thick prelaminated sheet both sides of approved colour lamination exterior grade upto 0.9m height, spacing of vertical member not exceeding 0.6 m. c to c; sections are cut to the required lengths, joints mitered and corners grinded subdividing frames tennoned and rivetted to the frames; the assembled frame stiffened with corner angles, stripped and fixed with screws, rawl plugs and teak wood gutties to R.C.C.columns on sides, R.C.C. lintels or beams at top and floor at bottom, including cutting chistelling and making good with cement mortar to match the surface; providing and fixing 5.5mm. thick plain glass for middle portion viz., 0.9m. to 2.13 m. and top panel with louvres sections; the glass and panels fitted withglazing clips of 19mmx17.3mm. of thickness 0.9mm. weight 0.124kg/ m, aluminium sections treated for removal of any rust and prevention of further rust formation, coated with greasy materials for non-adherence of mortars or any other sticky materials; vertical members embedded in the flooring by making suitable sized holes and fixing with cement mortar, with necessary opening for fixing of door of standard size (excluding cost of door) all the frame throughly cleaned, free from rust, scale or dirt including cost of materials, fixtures, labour and HOM of machinery complete as per specifications. using aluminium section anodized to 12 - 15 microns. **Page No. 35, Item No. 7.15.1 PWD SR 2016-17**								
		Sqm	1	3.00			2.40	7.20 **7.20**	3492.72	**25148.00**
	Basic Rate	3234.00								
	Area Weightage @ 8%	258.72								
	Total	**3492.72**								
23	Providing and fixing **Chorinated Poly Venyl Chloride (CPVC) pipes** conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete. (internal work exposed on wall) - **25mm nominal OD pipes. (P.No. 96/I.No. 13.85.3 of CSR 2016-17)**								
		mtr	1	50.00				**50.00** **50.00**	183.60	**9180.00**
	Basic Rate	170.00								
	Area Weightage @ 8%	13.60								
	Total	**183.60**								
24	Providing and fixing **Chorinated Poly Venyl Chloride (CPVC) pipes** conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete. (internal work exposed on wall) - **20 mm nominal OD pipes. (P.No. 96/I.No. 13.85.2 of CSR 2016-17)**								

Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	mtr	1	50.00			50.00		
						50.00	145.80	7290.00
Basic Rate	135.00							
Area Weightage @ 8%	10.80							
Total	**145.80**							
Supplying water **storage tanks** made of virgin polymer (LLDPE) with two layers outer Black or Blue and inner White layer of approved quality and make, conforming to I.S.I./ISO/SSI specifications. **(P.No. 265 / I.No. 37.58 of PWD SR 2016-17)**								
	Litre	1	2000.00			2000.00		
						2000.00	6.36	**12720.00**
Basic Rate	6.00							
Area Weightage @ 8%	0.36							
Total	**6.36**							
Reject Water : 2000 LPH								
RAW WATER PUMP								
Purpose:- To feed the Dual Medial filter at pressure more than 2.00 bars which is min								
SAND MEDIA FILTER								
Purpose:- To remove the total suspendred solids, dirt, iron and reduce silt density index								
ACTIVATE CARBON FILTER								
Purpose:- To remove the total color, smell, odor from the water.								
Media: Mixed bed sand media consisting of the following i) Gravel ii) Pebbles iii) carbon Average porosity 50 micron particulate size bed depth : 1500 mm pipelines & Accessories : Pipe of PVC 10 Bar tested pressure testing cock & pressure gauges at intlet - outlet of system								
DOSING SYSTEM								
Purpose : To dose anti scaling chemical to protect the scaling formation on RO Membranes								
MICRON FILTER								
Purpose : To remove the fine particles ip to 05 microns and reduce silt density levels to								
HIGH PRESSURE PUMP								
Purpose : To feed the reverse Osmosis membrane at pressure more than the osmotic pressure taking into consideration flux rate, flow and recovery								
RO membrane housing.								
Purpose : To pack membrane and operate at high pressure.								
RO MEMBRANES								
Purpose : To remove the major part of TDS into 98% by Reverse Osmosis Membranes arranged and designed to give adequate flow the Recovery.								
RO CLEANSING SYSTEM								
ELECTRICAL PANEL								
Purpose : A control panel is provided as a safety measure for the pumps & other electrical items.								
Specifications a) Complete starters, overload relays, b) Voltmeter, Ammeter, MCB's indicating lights, c) Rocker switches for Dozers, d) incomers, Auto-Manual switches.								
INSTRUMENTATION								

	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	Purpose : a) Flow meter : To measure the online flow of water flowtec b) Low pressure switch : To protect RO pump from dry running c) High pressure switch : To protect RO pump from back pressure d) Pressure Gauges : For calculate AP for each unit in RO system								
	PH DOSING SYSTEM								
	Purpose to dose sodium Bi-carbonate for enhances product water SS till the pre-filteration & SS from HPP to thhe premeter line termination point NRV's pressure relief valves, wherever needed the system will be on common SS base frame supply & manufacture of complete Reverse Osmosis plant stainless steel tank (2kl) Raw water tank (5kl) with stainless steel pipe line required for plant erection.								
			1				1	810000.00	**810000.00**
	ELECTRIFCATION								
	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2 X1.5Sq.mm Cable confirming to the GTP, with a 6Amps flush type SP control switch shall be fixed on the existing plastic sheet / gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. GROUP A b) Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch **(Page No. 05, Item No.2.1 KPWD SR 2014-15**								
		Point	1x6				6	245.00	**1470.00**
	c) Long point above 6Mtr upto 10Mtr from tapping point to out let via switch	Point	1x6				6	363.00	**2178.00**
	Supplying and flush mounting teak wooden box without front plank, made of not less than 12mm thick wood, after due groove cutting, Finishing with necessary cement plastering complete (1.6.5) 4"x4"x3" (101x101x76mm) **(Page No. 03, Item No. 1.6) KPWD SR 2014-15**								
		Each	1x30				30	68.00	**2040.00**
	(1.6.1) 12"x12"x3" (300x300x76mm)	Each	1x18				18	116.00	**2088.00**
	(1.6.3)10"x7"x3" (254x178x76mm)	Each	1x15				15	87.00	**1305.00**
	Supplying 4mm thick plastic sheet with necessary nitches for fixing switches, regulators etc., and fixing on existing wooden or metal box using N.F. screws. **(Page No. 17, Item No. 3.9) KPWD SR 2014-15**								
		SqCM					33333	0.25	**8333.00**
	Extra for Groove cutting in brick wall/CC floor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete. upto 50mm conduit in brick wall **(Page No. 03, Item No.1.7.1) KPWD SR 2014-15**								
		Mtr	1	30.00			30	21.00	**630.00**
	Supplying heavy gauge PVC Conduit Pipe 19/20 mm dia 2 mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering up to the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary. **(Page No. 02, Item No. 1.3.1) KPWD SR 2014-15**								
		Mtr	1	25.00			25	56.00	**1400.00**

Sl	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	Supplying and fixing PBBC/Bakelite straight or slant batten holder and wiring with 60w/230 volts lamps. **(Page No. 20, Item No. 4.2) KPWD SR 2014-15**	Each	4				4	88.00	352.00
	Supplying patti type fluorescent tube light fitting of 2' - suitable for 14 watts fluorescent tube fitting, made out of M.S. Sheet and stove enameled with HF Electronic Ballast , locking type brass contact holders mounted on double fold type sheet base fully wired for use on 230 volts AC . Supply including T5 lamp. **(Page No. 20, Item No. 4.5) KPWD SR 2014-15**	Each	4				4	591.00	2364.00
34	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP -A 1.5 sqmm **(Page No. 06, Item No. 2.5.2) KPWD SR 2014-15**	Mtr	1	15.00			15	18.60	279.00
35	Supplying and fixing cast Aluminum round or oblong type bulk head fitting with GI wire guard, glass cover with 60/100 watts 230V GLS lamp. **(Page No. 20, Item No. 4.3) KPWD SR 2014-15**	Each	1x8				8	747.00	5976.00
	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia **(Page No. 55, Item No. 7.1) KPWD SR 2014-15**	No	1				1	2727.00	2727.00
36	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A **P No. 55/ I No. 7.4.4 4 core 16 Sqmm KPWD Electrical SR 2014-15**	Mtr	1	10.00			10.00	140.40	1404.00
37	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct. **P No. 61 / I No. 7.8.1 6Sqmm to 16 Sqmm) KPWD Electrical SR 2014-15**	Mtr	1	10.00			10.00	10.80	108.00
38	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete For Cutting Road Surface .(As per Civil SR KSRB I-2, P-7) **P No. 61 / I. No. 7.9.3 KPWD Electrical SR 2014-15**	Mtr	1	5.00			5.00	85.00	425.00
39	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV 40mm dia GI pipe **P. No. 62 / I No. 7.12.1 KPWD Electrical SR 2014-15**	Mtr	1	4.00			4.00	345.00	1380.00
40	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers 16Sqmm etc., **P. No. 62 / I.No. 7.13.2 KPWD Electrical SR 2014-15**	No.	1				1.00	280.00	280.00
41	RO Plant BESCOM Deposit		1	10000.00					10000.00

Sl	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
							Sub Total		13,37,083.01 ~~1268800.82~~
A2	~~Add 12 % GST~~						1,60,449.96		~~152256.10~~
A3	~~Add TP charges @ 5.5%~~ SUB TOTAL						14,97,532.97		~~63440.04~~
A4	~~Add PMC charges @ 1%~~								~~12688.008~~
A5	Miscellaneous and Unforeseen Charges	L/S					2467.28		~~2815.04~~
							Total		1500000.00
	(Rs. Fifteen Lakhs Only)								

Certificate

1. The workspot was inspected and works is found to be necessary.
2. The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3. The rates adopted based on the PWD SR,Bangalore circle for year 2016-17 Pred SR 12-13
4. The Provisions made in the estimate are Necessary and essential.
5. This work is not included in any other work taken up

Assistant Engineer
Ward-12

Asst. Exeutive Engineer
Shetty halli Sub-division
BBMP, Bangalore

Exeutive Engineer
Dasarahalli division
BBMP, Bangalore

ನಂ.EE/DD/AS/146/18-19 ದಿನಾಂಕ: 29/01/19
Rs. Fifteen lakhs only
(15.00) ——11——
ಮೊತ್ತಕ್ಕೆ ಆಡಳಿತಾತ್ಮಕ ಮಂಜೂರಾತಿ ನೀಡಿದೆ
ಕಾರ್ಯಪಾಲಕ ಅಧಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ.ದಾಸರಹಳ್ಳಿ ವಿಭಾಗ
ದಾಸರಹಳ್ಳಿ ವಲಯ, ಬೆಂಗಳೂರು.

ನಂ. ದಿನಾಂಕ :
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ಗಳ ಅಂದಾಜು ಪಟ್ಟಿಗೆ ತಾಂತ್ರಿಕ ಮಂಜೂರಾತಿ ನೀಡಿದೆ
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